

WE CLAIM:

1. A charging circuit for a frequency converter, comprising:
a first feed line comprising a first constant current source therein;
a second feed line comprising a second constant current source therein;
an intermediate circuit capacitor connected between said first feed line and said second feed line, wherein said first constant current source that limits a charging current of said intermediate circuit capacitor; and
an electronic control device that controls both said first constant current source and said second constant current source in parallel.
2. The charging circuit in accordance with claim 1, further comprising a current sensor that is located in only one of said first and second feed lines, wherein said current sensor generates an output signal that is provided to said electronic control device.
3. The charging circuit in accordance with claim 2, wherein a common control signal for both said first constant current source and said second constant current source is generated from said output signal of said current sensor.
4. The charging circuit in accordance with claim 2, wherein if said output signal is too high, then both said first constant current source and said second current source are switched off by said electronic control device.

5. The charging circuit in accordance with claim 2, wherein if said output signal is too low, then both said first constant current source and said second current source are switched on by said electronic control device.

6. The charging circuit in accordance with claim 4, wherein if said output signal is too low, then both said first constant current source and said second current source are switched on by said electronic control device.

7. The charging circuit in accordance with claim 1, wherein a first choke is provided in said first feed line and a second choke is provided in said second feed line.

8. The charging circuit in accordance with claim 7, further comprising a recovery diode switched in between said first feed line and said second feed line, said recover diode absorbs charge current flowing in said first and second feed lines after said first constant current source and said second constant current source have been switched off.

9. The charging circuit in accordance with claim 2, wherein said electronic control device comprises:

a first driver stage for said first constant current source;

a second driver stage for said second constant current source, wherein said first and second driver stages are electrically separated from said control signal

used for parallel control of said first and second constant current sources.

10. The charging circuit in accordance with claim 9, further comprising optical couplers that electrically separate said control signal and said first and second driver stages.